

# USB 3.0 ENGINEERING CHANGE NOTICE

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## Title: USB3.0 Contact Plating Thickness Applied to: USB3.0 (11132008)-final

### **Brief description of the functional changes:**

The USB 3.0 Standard [section 5.7.3 Materials] does not require specific contact plating types or thicknesses, but only provides reference information. In order to maintain harmony with the USB 2.0 plug in the USB 3.0 receptacle, identical contact plating requirements from USB2.0 are being applied to the USB 3.0 specification.

### **Benefits as a result of the changes:**

Consistent reliability for USB 3.0 plugs and receptacles, and assurance that all connector vendors will use the same proven contact plating from USB 2.0 in the manufacturing of the MicroUSB 3.0 plugs and receptacles. It also levels the playing field among connector suppliers.

### **An assessment of the impact to the existing revision and systems that currently conform to the USB specification:**

No USB3 system exists yet and the USB3 connector is still in final stage development. The precedence for this change was the specification of USB 3.0 shell material type & thickness.

### **An analysis of the hardware implications:**

Connector vendors must provide the USB 3.0 contacts in direct compliance with the USB 2.0 contact plating types and thicknesses.

### **An analysis of the software implications:**

None.

### **An analysis of the compliance testing implications:**

The USB3.0 Connector Compliance Spec is still under development and this change is covered by the compliance specification.

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## Actual Changes

(a). From Text (and location): Section 5.7.3, Page 127,

### Materials

This specification does not specify materials for connectors and cables. Connector and cable manufacturers shall select appropriate materials based on performance requirements. Table 5-17 below is provided for reference only.

### Note should read:

#### Materials

Connector and cable manufacturers shall comply with contact plating requirements, per the following options:

##### Option I

###### Receptacle

Contact area: (Min) 0.05  $\mu\text{m}$  Au + (Min) 0.75  $\mu\text{m}$  Ni-Pd on top of (Min) 2.0  $\mu\text{m}$  Ni

Contact tail: (Min) 0.05  $\mu\text{m}$  Au on top of (Min) 2.0  $\mu\text{m}$  Ni

###### Plug

Contact area: (Min) 0.05  $\mu\text{m}$  Au + (Min) 0.75  $\mu\text{m}$  Ni-Pd on top of (Min) 2.0  $\mu\text{m}$  Ni

##### Option II

###### Receptacle

Contact area: (Min) 0.75  $\mu\text{m}$  Au on top of (Min) 2.0  $\mu\text{m}$  Ni

Contact tail: (Min) 0.05  $\mu\text{m}$  Au on top of (Min) 2.0  $\mu\text{m}$  Ni

###### Plug

Contact area: (Min) 0.75  $\mu\text{m}$  Au on top of (Min) 2.0  $\mu\text{m}$  Ni.

Other material parameters, which connector and cable manufacturers shall select based on performance parameters, are listed below in Table 5-17 for reference only.

(Insert table 5-17 **with contact section removed**)